

In addition to the above localities the species has been recorded by Walker* from "St. Martin's Falls, Albany River, Hudson's Bay (Dr. Barnston)"; "Fort Confidence (Sir J. Richardson)"; by Grote† from "Yukon River, mouth of Porcupine River (R. Kennicott)"; and ‡ "Racine, Wis. (P. R. Hoy)"; and by Zeller†† from "Fort Resolution am Sklaven-see (Great Slave Lake) Westlich von der Hudson's Bay unter dem 61° N. Br. (Baron Osten Sacken).

*C. B. Mus. Het. XI, 702, 1857.

†Proc. Ent. Soc. Phil. III, 74, 1864.

‡Bull. Bkln, Ent. Soc. III, 30.

††Stett., Ent. Zeit. XXIV, 136.

NEW SPECIES OF MICROLEPIDOPTERA.

BY ANNETTE F. BRAUN, CINCINNATI, O.

Coptodisca magnella, n. sp.

Palpi and lower part of face silvery white; head with a decided pale golden lustre. Antennæ fuscous.

Thorax and basal half of fore wings pale silvery gray, almost white; extreme costa on basal half black. Apical half of fore wings golden yellow; a triangular silvery white spot at the apical third of the costa edged with black on both sides; a similar but narrower spot a little anterior on the dorsal margin, also edged with black on both sides. The outer edge of the dorsal spot forms part of the dark patch of scales which extend from it to the dorsum and termen. This patch is often pale gray and ill-defined, except at its outer edge, which is marked by a row of dark scales along the termen. It is separated from the dark margins of the costal silvery spot by the golden ground colour. Beyond the costal spot and almost parallel to its outer margin is a streak of black scales. Apical patch wedge-shaped, formed of a circular velvety black spot, and the terminal row of black scales immediately beyond it. It is preceded and edged on either side with one or two silvery white scales; and well separated from the dark dorsal patch by the golden yellow ground colour. Cilia whitish yellow, with an apical black pencil extending outward from the apical black patch. Hind wings gray.

Legs yellow, except the fore tibiae and all the tarsi, which are fuscous. Abdomen fuscous above, yellow beneath.

Expanse: 5-6 mm.

Nine specimens, Lancaster, Ohio, bred from mines on leaves of huckleberry, *Gaylussacia baccata* (Wang.) Koch. The mine is of the usual character in the genus, starting as a narrow linear mine which abruptly enlarges into a semitransparent blotch (10 by 3 or 4 mm.). The elliptical case is attached as usual by a silken band to a leaf or twig. Mines which were collected August 21, 1914, produced imagos May 10-17 of the following year.

This is the largest species of the genus thus far described. Apart from its size, it may be distinguished from other species chiefly by the pale basal half of the fore wings and the fact that the dark dorsal patch never extends nearer the costa than the apex of the dorsal silvery spot, and therefore the ground colour extends without interruption between the silvery spots to the termen beneath the apical spot.

It is most closely related, particularly in character of mine and shape of pupal case, to *C. ostryæfoliella* Clem., of which there seems to be no published description. To supply this the following brief description of *C. ostryæfoliella* is given.

Coptodisca ostryæfoliella Clemens.

Antennæ fuscous; head with other appendages pale silvery gray.

Thorax and fore wings in the basal half pale silvery gray; apical half of fore wings yellow. At the apical third is a triangular silvery white spot dark margined on both sides. A little anterior on the dorsal margin, a similar but smaller and shorter spot narrowly separated from the costal spot by the ground colour or by the costal-wards and proximal extension of the dark dorsal patch lying beyond the dorsal white spot. This dark patch extends nearly or quite to the apical fan-shaped black spot, which is preceded and edged as usual by one or two silvery scales, and from which the usual black pencil extends outward into the cilia, which are whitish. Preceding the apex in the costal cilia is an almost perpendicular streak of black scales. Hind wings pale gray.

Abdomen gray above, silvery beneath. Legs silvery with dark fuscous tarsi.

Expanse: 4-4.2 mm.

***Bucculatrix crescentella*, n. sp.**

Face whitish, tuft on the vertex whitish, more or less intermixed with ochreous or dark brown hairs.

Fore wings usually brown; sometimes paler, almost buffish ochreous. A whitish streak, sharply defined in dark specimens, extends from the base for one-half the wing length above the fold; immediately beneath the ground colour is somewhat darkened. At the middle of the costa is a narrow oblique curved white streak, concave outwardly; beyond it a less oblique white streak pointing toward the tornus; between these streaks the ground colour is a darker brown. On the middle of the dorsum is a half crescent-shaped dark brown spot, bordered before and behind with whitish. A triangular white spot immediately precedes the apex and lies above an irregular black spot, beyond which a line of dark scales crosses the apical cilia. Hind wings gray, brown or ochreous tinged.

Legs yellowish, marked with fuscous; hairs on posterior tibiae pale ochreous.

Expanse: 7-9 mm.

Described from a series of bred and captured specimens. This is one of the commonest species around Cincinnati; it occurs also at Toronto, Canada. Mines may be found plentifully on species of *Compositae* belonging to several genera (*Aster* spp., *Solidago* spp., *Erigeron* spp.). The larva makes a trumpet-shaped mine, gradually increasing in diameter and marked by a central line of frass. On rare occasions it deserts one mine to form another, but is at no time an external feeder. The cocoon of the usual *Bucculatrix* type is a white elongate ribbed structure.

***Lyonetia candida*, n. sp.**

Face, palpi and antennal eye-cap silvery white; antennal stalk gray. Tuft on the vertex white, with a few blackish hairs, especially behind.

Fore wings shining pure white, except in the apical part. Just before the costal cilia is an oblique triangular grayish streak, apparently formed by the confluence of two narrower streaks, which are sometimes indistinctly separated from one another by white ground colour. This is followed by three perpendicular, slightly curved black streaks in the cilia preceding the round black

apical dot. The last of these meets a similar black streak projecting into the cilia below the apex. The oblique triangular costal streak meets in the middle of the wing the apex of a grayish V-shaped mark placed at the tornus. The space between the arms of this mark is sometimes suffused with gray. A yellow patch occupies the apex of the wing and is margined along the termen by blackish scales. A black streak projecting out into the apical cilia from the apical dot is crossed at right angles by a nearly straight black line. Hind wings and cilia gray.

Abdomen gray, white beneath. Legs whitish, tarsal segments tipped with black.

Expanse: 9-10.5 mm.

Three specimens, Santa Cruz Big Trees, Calif., the larvæ mining leaves of Azalea, *Rhododendron occidentale* Gray, July 21; one specimen, Mt. Rainier, Wash., mining leaves of the white Rhododendron, *Rhododendron albiflorum* Hook., August 15. The imagos appeared August 4-7 and August 28.

The early long very narrow linear mine (3-4.5 mm.) abruptly enlarges into an irregular blotch. The pupa is enclosed in a slight white cocoon.

This species is nearest to *L. latistrigella* Wlsm., also a *Rhododendron* miner; but differs strikingly from it in the absence of the conspicuous curved black streak from the middle of the dorsum.

NOTES AND QUERIES.

NOTES ON SOME MISCELLANEOUS ECONOMIC INSECTS FOUND IN NEW JERSEY.

Callopietria floridensis Guen. (Lep.). This insect, known as the Florida Fern-Cutworm, which has already been recorded by me as occurring in New Jersey (Canad. Ent., Jan. 1915), and doing considerable damage to ferns in greenhouses, was found to be effectively controlled by spraying with fresh pyrethrum, one ounce to one gallon of water, plus one half ounce of soap. One large fern grower in New Jersey applied the above spray once a week for five or six weeks and gained complete relief. Pyrethrum was also applied with a bellows, and similar results obtained. Mr. J. J. Davis, in the 27th Report of the State Entomologist of Illinois, advocates the use of this material, which is undoubtedly the best insecticide to use against this pest.